

**Notice of Allowability**

Application No.

10/789,172

Examiner

Ling-Siu Choi

Applicant(s)

PATIL ET AL.

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1713

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☐ This communication is responsive to Preliminary Amendment.
2. ☐ The allowed claim(s) is/are 19 and 20.
3. ☐ The drawings filed on 27 February 2004 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
  1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |  |
|---|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment                               |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material          | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance   |
|   | 9. <input type="checkbox"/> Other _____.   |

**DETAILED ACTION**

1. This application is a Divisional of US Application Serial Number 10/228,755 filed August 27, 2002.

2. This Office Action is in response to the Preliminary Amendment filed February 27, 2004. Claims 1-18 were canceled and claims 19-20 are now pending.

***Allowable Subject Matter***

3. Claims 19-20 are allowed.

4. The following is an examiner's statement of reasons for allowance:

The present claims are allowable over the closest references: Drent (US 4,804,738), Drent (EP 0 264 159), Tybus et al. (US 3,929,700), and Case et al. (US 5,278,236).

The present invention relates to a PVC resin composition comprising

(1)	Polyvinyl chloride	
(2)	Plasticizer	(i) a geminally disubstituted olefin-carbon monoxide-ethylene polymer or
		(ii) a geminally disubstituted olefin-carbon monoxide-ethylene-X polymer, wherein X = free radical polymerizable monomer, or
		(iii) mixtures of (i) and (ii)

(summary of claim 19)

Drent'738 discloses a linear alternating terpolymer of carbon monoxide, ethylene, and a secondary ethylenically unsaturated hydrocarbon, the secondary ethylenically unsaturated hydrocarbon being preferred to be isobutylene (abstract; col. 3, lines 67-68). However, Drent'738 does not teach or fairly suggest a PVC resin composition comprising a geminally disubstituted olefin-carbon monoxide-ethylene polymer, a geminally disubstituted olefin-carbon monoxide-ethylene-X polymer, or a mixture of (i) and (ii) as a plasticizer.

Drent'159 disclose a linear terpolymer of carbon monoxide with ethene and with one or more other aolefinically unsaturated hydrocarbon in the general formula of  $\text{CH}_2=\text{C}(\text{R}_6)(\text{CHR}_7\text{R}_8)$  (claim 1). However, Drent'159 does not teach or fairly suggest a PVC resin composition comprising a geminally disubstituted olefin-carbon monoxide-ethylene polymer, a geminally disubstituted olefin-carbon monoxide-ethylene-X polymer, or a mixture of (i) and (ii) as a plasticizer.

Tybus et al. disclose a polyvinyl chloride composition comprising polyvinyl chloride, a plasticizer, an impact-modifier, a processing aid, and a lubricant, wherein the plasticizer is a phthalate; processing aid is acrylic-type; lubricant is glyceride, citrate, or carboxylic acid (claims 1 and 4). Thus, Tybus et al. does not teach or fairly suggest a PVC resin composition comprising a geminally disubstituted olefin-carbon monoxide-ethylene polymer, a geminally disubstituted olefin-carbon monoxide-ethylene-X polymer, or a mixture of (i) and (ii) as a plasticizer.

Case et al. disclose a blend of E/X/Y terpolymer and polyvinyl chloride, wherein E = ethylene; X =  $\text{C}_{2-10}$  n-alkyl acrylate; Y = CO or  $\text{SO}_2$  (claim 1). Thus, Case et al. does not teach or


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fairly suggest a PVC resin composition comprising a geminally disubstituted olefin-carbon monoxide-ethylene polymer, a geminally disubstituted olefin-carbon monoxide-ethylene-X polymer, or a mixture of (i) and (ii) as a plasticizer.

***Conclusion***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ling-Siu Choi whose telephone number is 571-272-1098.

If attempt to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reach on 571-272-1114.



Ling -Siu Choi

July 26, 2004